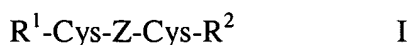


Applicant: Vrijbloed et al.  
Application No.: Unassigned  
Filing Date: Herewith  
Docket No.: 753-65 PCT/US  
Page 3

**B. Amendments to the Claims:**

The listing of claims will replace all prior versions and listings of claims in the application:

1. (original) A template-fixed  $\beta$ -hairpin mimetic of the general formula



wherein

the two Cys residues are bridged by a disulfide bond thereby forming a cyclic peptide;

$R^1$  and  $R^2$  are

A-B and B-C; or B-A and C-B; or C-B and B-A; or B-C and A-B; or C-A and C-A; or A-C and A-C; or C-A and C-B; or B-B and C-B; or B-B and B-C; or A-B and C-C; or B-A and C-C; or C-B and B-B; or B-C and B-B; or C-C and B-A; or C-C and A-B; or B-B and C-C; or C-C and B-B; or A-C and B-C; or C-B and C-A; or B-C and A-C; or A-C and A-B; or B-A and C-A; A-A and C-C; or C-C and A-A;

or A-B-C and A-B-C; or B-A-B and B-C-B; or B-C-B and B-A-B; or A-B-B and B-B-C; or C-B-B and B-B-A; or A-C-B and B-A-C; or C-A-B and B-C-A; or B-A-B and B-C-C; or B-C-B and B-A-C; or C-C-B and B-B-A; or C-C-B and B-A-B; or C-B-B and C-C-A; or A-C-C and B-B-C; or B-C-C and B-A-B; or B-C-C and B-A-C; or A-B-B and B-C-C; or B-A-B and C-C-B; or C-A-B and C-C-B; or B-B-B and B-C-C; or C-B-B and B-B-B; or B-B-B and C-C-B; or B-C-C and B-B-B; or A-B-C and B-B-C; or C-B-B and C-B-A; or A-B-C and A-C-C; or C-C-A and C-B-A; or B-A-C and A-C-B; or B-C-A and C-A-B; or C-B-A and C-B-A; or A-A-B and B-C-C; or C-C-B and B-A-A; or B-B-C and A-C-C; or B-B-C and A-B-C; or B-B-C and B-B-C; or B-B-C and B-B-B; or B-A-C and B-C-C; or C-C-B and C-A-B; or C-C-B and C-B-A; or A-B-C and B-C-C; or C-A-B and B-C-B; or B-C-B and B-B-C; or C-B-B and B-C-B; or B-C-B and B-B-B; or B-B-B and B-C-B; or C-B-B and B-C-A; or A-C-B and B-B-C; or C-B-B and C-B-B; or B-B-B

and B-B-B; or B-B-B and B-B-C; or A-A-C and A-C-C; or C-C-A and C-A-A; or A-A-C and A-C-B; or B-C-A and C-A-A; or A-A-C and B-C-C; or C-C-B and C-A-A; or A-A-B and C-C-B; or B-C-C and B-A-A; or A-B-A and C-B-C; or C-B-C and A-B-A; or A-B-B and C-B-C; or C-B-C and B-B-A; or B-A-A and C-C-B; or B-C-C and A-A-B; or B-B-A and C-B-B; or B-B-C and A-B-B; or B-B-A and C-C-B; or B-C-C and A-B-B; or B-B-C and A-C-B; or B-C-A and C-B-B; or B-C-B and C-B-B; or B-B-C and B-C-B; or B-C-B and C-A-B; or B-A-C and B-C-B; or B-C-B and C-B-B; or B-A-C and A-C-B; or B-A-C and A-C-C; or C-C-A and C-A-B; or B-A-C and B-C-C; B-C-C and A-A-C; or C-A-A and C-C-B; or C-A-A and C-C-A; or A-C-C and A-A-C; or C-B-A and C-C-A; or A-C-C and A-B-C; or C-B-A and C-B-B; or C-B-A and C-C-B; or B-C-C and A-B-C; or C-B-B and C-C-A; or C-B-B and C-B-B; or C-B-B and C-C-B; or B-C-C and B-B-C; or C-C-A and C-A-B; or C-C-A and C-B-B; or C-C-B and B-B-B; or C-C-B and C-A-A; or C-C-B and C-B-A; or C-C-B and C-B-B; or B-B-C and B-C-C; or A-C-B and B-B-C; or A-C-C and B-B-C;

A being any one of Asn, Gln, Asp, Glu, Thr, Ser and Gly;

B being any one of Val, Ile, Ser, Thr, Phe, Tyr, Trp and Gly; and

C being any one of Arg, Lys and Gly; and

Z is a chain of n amino acid residues with n being an integer from 4 to 20 and with each of these n amino acid residues being, independently, derived from any naturally occurring L- $\alpha$ -amino acid.

2. (original) A compound according to claim 1 wherein R<sup>1</sup> and R<sup>2</sup> are

Glu-Thr and Thr-Lys; or Lys-Thr and Thr-Glu; or  
Thr-Glu and Lys-Thr; or Thr-Lys and Glu-Thr; or  
Leu-Glu and Lys-Val; or Val-Lys and Glu-Leu; or  
Glu-Leu and Val-Lys; or Lys-Leu and Val-Glu; or  
Asn-Gly and Lys-Val; or Val-Gly and Lys-Asn; or  
Gly-Asn and Val-Lys; or Gly-Val and Asn-Lys; or  
Gly-Gly and Gly-Gly; or

Glu-Leu-Lys and Glu-Val-Lys; or Lys-Val-Glu and Lys-Leu-Glu; or  
Leu-Glu-Lys and Glu-Lys-Val; or Val-Lys-Glu and Lys-Glu-Leu; or  
Glu-Lys-Leu and Val-Glu-Lys; or Lys-Glu-Val and Leu-Lys-Glu; or  
Lys-Glu-Leu and Val-Lys-Glu; or Glu-Lys-Val and Leu-Glu-Lys; or  
Lys-Val-Gly and Gly-Leu-Glu; or Glu-Leu-Gly and Gly-Val-Lys; or  
Val-Lys-Gly and Gly-Glu-Leu; or Leu-Glu-Gly and Gly-Lys-Val; or  
Val-Gly-Lys and Glu-Gly-Leu; or Leu-Gly-Glu and Lys-Gly-Val; or  
Gly-Gly-Gly and Gly-Gly-Gly.

3. (currently amended) A compound according to claim 1 ~~or~~ 2 wherein Z contains

-Arg-Gly-Asp-,  
-Glu-Leu-Arg-,  
-Arg-Lys-Lys- or  
-Lys-Gly-Phe-

or consists of, or contains

-Val-Arg-Lys-Lys- [SEQ ID NO:1],  
-Lys-Lys-Tyr-Leu- [SEQ ID NO:2],  
-Trp-Leu-Asp-Val- [SEQ ID NO:3],  
-Tyr-Ile-Arg-Leu-Pro- [SEQ ID NO:4],  
-Tyr-Ile-Gly-Ser-Arg- [SEQ ID NO:5],  
-Ile-Lys-Val-Ala-Val- [SEQ ID NO:6],  
-Pro-Pro-Xaa-Xaa-Trp- [SEQ ID NO:7] wherein Xaa can be residues of any  
naturally occurring L- $\alpha$ -amino acids,  
-Leu-Trp-Tyr-Ser-Asn-His-Trp-Val- [SEQ ID NO:22],  
-Lys-Trp-Phe-Ser-Asn-His-Tyr-Gln- [SEQ ID NO:23],  
-Phe-Leu-Ala-His-Tyr-Ala- [SEQ ID NO:24] or  
-Leu-Trp-Tyr-Ser-Asn-His-Trp-Val-Lys-Trp- [SEQ ID NO:25].

Applicant: Vrijbloed et al.  
Application No.: Unassigned  
Filing Date: Herewith  
Docket No.: 753-65 PCT/US  
Page 6

4. (currently amended) A library of template-fixed  $\beta$ -hairpin mimetics comprising a plurality of compounds according to ~~any one of~~ claims 1 ~~to~~ 3.
5. (original) A library according to claim 4 wherein the template fixed  $\beta$ -hairpin mimetics are fused to at least a portion of phage coat protein, and the template fixed  $\beta$ -hairpin mimetics are displayed on the surface of a phage or phagemid particle.
6. (currently amended) A method of screening for template fixed hairpin  $\beta$ -mimetics having a template that conformationally stabilizes a  $\beta$ -hairpin and which is capable of binding to a specific binding partner comprising the steps of
  - a) providing a library of template fixed  $\beta$ -hairpin mimetics according to ~~claim 3 or~~ claim 4;
  - b) contacting the library of step a) with a binding partner;
  - c) selecting from the library peptides capable of forming a non-covalent complex with the binding partner; and
  - d) optionally isolating the peptides or determining of sequence by DNA-analysis of step c).
7. (original) A method according to claim 6 wherein the binding partner is selected from the group consisting of an antibody, an enzyme, a receptor and a ligand.
8. (currently amended) A peptide which has been determined and optionally isolated by the process according to claim ~~6 or~~ 7.
9. (original) A synthetic peptide having a structure which is identical to the structure of the peptide according to claim 8.
10. (new) A compound according to claim 2 wherein Z contains  
-Arg-Gly-Asp-,

Applicant: Vrijbloed et al.  
Application No.: Unassigned  
Filing Date: Herewith  
Docket No.: 753-65 PCT/US  
Page 7

-Glu-Leu-Arg-,  
-Arg-Lys-Lys- or  
-Lys-Gly-Phe-

or consists of, or contains

-Val-Arg-Lys-Lys- [SEQ ID NO:1],  
-Lys-Lys-Tyr-Leu- [SEQ ID NO:2],  
-Trp-Leu-Asp-Val- [SEQ ID NO:3],  
-Tyr-Ile-Arg-Leu-Pro- [SEQ ID NO:4],  
-Tyr-Ile-Gly-Ser-Arg- [SEQ ID NO:5],  
-Ile-Lys-Val-Ala-Val- [SEQ ID NO:6],  
-Pro-Pro-Xaa-Xaa-Trp- [SEQ ID NO:7] wherein Xaa can be residues of any  
naturally occurring L- $\alpha$ -amino acids,  
-Leu-Trp-Tyr-Ser-Asn-His-Trp-Val- [SEQ ID NO:22],  
-Lys-Trp-Phe-Ser-Asn-His-Tyr-Gln- [SEQ ID NO:23],  
-Phe-Leu-Ala-His-Tyr-Ala- [SEQ ID NO:24] or  
-Leu-Trp-Tyr-Ser-Asn-His-Trp-Val-Lys-Trp- [SEQ ID NO:25].

11. (new) A library of template-fixed  $\beta$ -hairpin mimetics comprising a plurality of compounds according to claim 2.

12. (new) A library according to claim 11 wherein the template fixed  $\beta$ -hairpin mimetics are fused to at least a portion of phage coat protein, and the template fixed  $\beta$ -hairpin mimetics are displayed on the surface of a phage or phagemid particle.

13. (new) A library of template-fixed  $\beta$ -hairpin mimetics comprising a plurality of compounds according to claim 3.

Applicant: Vrijbloed et al.  
Application No.: Unassigned  
Filing Date: Herewith  
Docket No.: 753-65 PCT/US  
Page 8

14. (new) A library according to claim 13 wherein the template fixed  $\beta$ -hairpin mimetics are fused to at least a portion of phage coat protein, and the template fixed  $\beta$ -hairpin mimetics are displayed on the surface of a phage or phagemid particle.